ABSTRACT OF THE DISCLOSURE

An analog front end for communicating discrete multitone modulated signals on a subscriber line includes a transmit block, a receive block, and a hybrid packaged within a same integrated circuit. Upstream data to be transmitted to the subscriber line is pre-processed to eliminate even images. A power spectral density shaping filter subsequently substantially eliminates undesired energy in the upstream data signal. A high pass filter further rejects upstream data from the downstream data signal. The power spectral density filter and the high pass filter enable the use of a first order hybrid network for extracting the downstream data. The analog front end may include an additional analog channel to enable voiceband (e.g., v.90) communication concurrent with non-voiceband (e.g., xDSL) operation. Sample rate conversion is utilized to avoid the use of multiple independent clocks for otherwise incompatible clocking requirements.